

**AMENDMENTS TO THE CLAIMS:**

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

**LISTING OF CLAIMS:**

1-5. (Canceled).

6. (Previously Presented) A method for padding segments for transmitting data on a bus system, the segments having a preset total number of binary information pieces, comprising:  
transmitting the data in the segments; and  
in the event of transmission of data including less binary information than a predetermined total number of the segments, padding the data to the total number of the segments by a filling pattern of a corresponding number of binary information pieces, wherein the filling pattern includes a number of binary information pieces that corresponds to the total number of the segments and is first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

7. (Previously Presented) The method as recited in Claim 6, wherein:  
the binary information pieces include bytes.

8. (Previously Presented) The method as recited in Claim 6, wherein the binary information of the filling pattern and the binary information of the data are written in a buffer memory into the segment, and the segment is transmitted from the buffer memory to the bus system.

9. (Previously Presented) The method as recited in Claim 6, wherein the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots.

10. (Previously Presented) A device for padding segments for transmitting data on a bus system, the segments having a predetermined total number of binary information pieces, comprising:  
a first arrangement for transmitting the data in the segments; and

a second arrangement for, in the event of transmission of data including less binary information than the predetermined total number of the segment, padding the data to the total

number of the segment through a filling pattern of a corresponding number of binary information pieces, wherein the second means first writes the filling pattern, whose number of binary information pieces corresponds to the total number of the segment, into the segment and subsequently writes the binary information of the data into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

11. (Previously Presented) The device as recited in Claim 10, wherein:  
the binary information pieces include bytes.

12. (Previously Presented) A bus system, comprising:  
a device for padding segments for transmitting data on the bus system, the segments having a predetermined total number of binary information pieces, the device including:  
a first arrangement for transmitting the data in the segments; and

a second arrangement for, in the event of transmission of data including less binary information than the predetermined total number of the segment, padding the data to the total number of the segment through a filling pattern of a corresponding number of binary information pieces, wherein the second means first writes the filling pattern, whose number of binary information pieces corresponds to the total number of the segment, into the segment and subsequently writes the binary information of the data into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

13. (Previously Presented) The bus system as recited in Claim 12, wherein:  
the binary information pieces include bytes.

14. (New) The bus system as recited in Claim 12, wherein:  
the binary information pieces include bytes,  
the binary information of the filling pattern and the binary information of the data are written in a buffer memory into the segment, and the segment is transmitted from the buffer memory to the bus system, and  
the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots.

15. (New) The bus system as recited in Claim 12, wherein when actual data content is copied into a transmission buffer and then supplemented a padding pattern, the following incorrect padding errors are prevented: (i) an incorrect message arises because message content is partially overwritten; (ii) an incorrect message arises because message content is completely overwritten; and (iii) an undefined message or undefined data arises because a message length is padded beyond a permissible length.

16. (New) The bus system as recited in Claim 15, wherein the incorrect padding errors are prevented even if at least one of a cyclic redundancy check and a plausibility check do not uncover the incorrect padding errors.

17. (New) The bus system as recited in Claim 14, wherein when actual data content is copied into a transmission buffer and then supplemented a padding pattern, the following incorrect padding errors are prevented: (i) an incorrect message arises because message content is partially overwritten; (ii) an incorrect message arises because message content is completely overwritten; and (iii) an undefined message or undefined data arises because a message length is padded beyond a permissible length.

18. (New) The bus system as recited in Claim 17, wherein the incorrect padding errors are prevented even if at least one of a cyclic redundancy check and a plausibility check do not uncover the incorrect padding errors.

19. (New) The method as recited in Claim 1, wherein:

the binary information pieces include bytes,

the binary information of the filling pattern and the binary information of the data are written in a buffer memory into the segment, and the segment is transmitted from the buffer memory to the bus system, and

the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots.

20. (New) The method as recited in Claim 1, wherein when actual data content is copied into a transmission buffer and then supplemented a padding pattern, the following incorrect padding errors are prevented: (i) an incorrect message arises because message content is partially overwritten; (ii) an incorrect message arises because message content is completely

overwritten; and (iii) an undefined message or undefined data arises because a message length is padded beyond a permissible length.

21. (New) The method as recited in Claim 20, wherein the incorrect padding errors are prevented even if at least one of a cyclic redundancy check and a plausibility check do not uncover the incorrect padding errors.

22. (New) The method as recited in Claim 19, wherein when actual data content is copied into a transmission buffer and then supplemented a padding pattern, the following incorrect padding errors are prevented: (i) an incorrect message arises because message content is partially overwritten; (ii) an incorrect message arises because message content is completely overwritten; and (iii) an undefined message or undefined data arises because a message length is padded beyond a permissible length.

23. (New) The method as recited in Claim 22, wherein the incorrect padding errors are prevented even if at least one of a cyclic redundancy check and a plausibility check do not uncover the incorrect padding errors.

24. (New) The device as recited in Claim 10, wherein:

the binary information pieces include bytes,

the binary information of the filling pattern and the binary information of the data are written in a buffer memory into the segment, and the segment is transmitted from the buffer memory to the bus system, and

the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots.

25. (New) The device as recited in Claim 10, wherein when actual data content is copied into a transmission buffer and then supplemented a padding pattern, the following incorrect padding errors are prevented: (i) an incorrect message arises because message content is partially overwritten; (ii) an incorrect message arises because message content is completely overwritten; and (iii) an undefined message or undefined data arises because a message length is padded beyond a permissible length.

26. (New) The device as recited in Claim 25, wherein the incorrect padding errors are prevented even if at least one of a cyclic redundancy check and a plausibility check do not uncover the incorrect padding errors.

27. (New) The device as recited in Claim 24, wherein when actual data content is copied into a transmission buffer and then supplemented a padding pattern, the following incorrect padding errors are prevented: (i) an incorrect message arises because message content is partially overwritten; (ii) an incorrect message arises because message content is completely overwritten; and (iii) an undefined message or undefined data arises because a message length is padded beyond a permissible length.

28. (New) The device as recited in Claim 27, wherein the incorrect padding errors are prevented even if at least one of a cyclic redundancy check and a plausibility check do not uncover the incorrect padding errors.